COGNIA'S STRATEGIC THINKING AND PLANNING PROCESS: IMPLEMENTATION AND OUTCOMES IN FLORIDA

ESSA Level III Study (2021–24)

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INSTRUCTURE
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EXECUTIVE SUMMARY

Cognia contracted with Instructure to examine the relationship between *Cognia's Strategic Thinking and Planning Process* and student outcomes. Instructure designed a research study to satisfy Level III requirements (Promising Evidence) according to the Every Student Succeeds Act.

Study Sample and Measures

This study, conducted over the 2021–22, 2022–23, and 2023–24 school years, involved 10,579 students in grades K–12 across 29 schools in a Florida school district. These schools implemented critical initiatives outlined in the districts' strategic plan, which the school district developed in collaboration with Cognia's Strategic Thinking and Planning Process improvement team.

Researchers used various quantitative analytic approaches to examine how the level of implementation of critical initiatives for each school related to student outcomes during the study period. Data sources included school-level critical initiatives implementation data, and student outcome metrics such as attendance, discipline, and scores from the Florida Assessment of Student Thinking (FAST) English language arts (ELA) and math assessments. These analyses provided insights into the degree of implementation and evidence of its potential impact on student outcomes.

Methods

Researchers used descriptive statistics to summarize participant characteristics and to support analyses of implementation. Researchers conducted regressions to explore the relationships between the level of critical initiatives implementation at each school and corresponding student outcomes.

Key Findings

+ K–12 students in schools who implemented more critical initiatives outlined in the districts' strategic plan during the 2021–24 school years demonstrated significantly **lower office discipline referrals**.

+ Grade 8 students in schools who implemented more critical initiatives outlined in the districts' strategic plan during the 2021–24 school years demonstrated significantly **higher ELA scores on the FAST assessment.**

+ Grade 8 students in schools who implemented more critical initiatives outlined in the districts' strategic plan during the 2021–24 school years demonstrated significantly **higher math scores on the FAST assessment.**

Note. These findings were statistically significant at the $p < 0.05$ level.

Conclusions

This study provides results to satisfy ESSA evidence requirements for Level III (Promising Evidence) given the study design and positive, statistically significant findings.

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INTRODUCTION

Cognia's Strategic Thinking and Planning Process is a flexible, four-phase framework designed to drive continuous improvement. It begins by envisioning the institution's future, evaluating its current state, and determining key priorities. The following phases—envisioning, planning, implementing, and evaluating—ensure that strategic planning goes beyond setting goals. Instead, it establishes a responsive, data-driven cycle that fosters ongoing progress and supports long-term educational growth.

As part of its ongoing efforts to demonstrate the effectiveness of *Cognia's Strategic Thinking and Planning Process*, Cognia contracted with Instructure to examine the relationship between *Cognia's Strategic Thinking and Planning Process* and student outcomes. Instructure designed the study to satisfy Level III requirements (Promising Evidence) according to the Every Student Succeeds Act.

The following research questions guided this study:

Implementation

1. What critical initiatives did administrators and strategic improvement team members develop for the school district?
2. To what extent did administrators and strategic improvement team members implement the school districts' critical initiatives across all schools?

Outcome

3. How does the type or level of implementation of critical initiatives relate to:
   a. Student attendance data?
   b. Student disciplinary data?
   c. Student academic performance?

This report details the study design and methods, implementation, findings, conclusions, and recommended next steps.

STUDY DESIGN AND METHODS

This section of the report briefly describes the study participants, measures, and analysis methods.

Study Design

This study used a correlational design to align with ESSA evidence standards. It included schools that implemented the school district's critical initiatives during the 2021–22, 2022–23, and 2023–24 school years.

Setting

The study included students in grades K–12 from 29 schools in one school district in Florida. The final sample included 10,579 students. The study included a full K–12 sample for discipline and attendance outcomes and only a full sample for grades 5 and 8 for the Florida Assessment of Student Thinking (FAST) English language arts (ELA; n=2,583) and math sample (n=2,048).

Participants

According to district-provided school data, the discipline and attendance sample (n = 10,579) was drawn from 29 schools: 13 elementary, 7 middle, 5 high schools, two K–6, one K–8, one K–12, and one 6–12 schools.

The FAST ELA (n=2,583) and math (n=2,048) samples included 21 schools: 12 elementary and 6 middle schools, one K–8, one K–12, and one 6–12 charter school. Students in grades 5 and 8 participated, with the following distribution for each sample: ELA included grade 5 (50%) and grade 8 (50%), while math included grade 5 (64%) and grade 8 (36%).

Measures

Researchers collected data on the implementation of critical initiatives at the school level (i.e., the percentage of critical initiatives implemented at each school). School leaders self-reported their level of implementation, providing detailed information on their perceptions of the progress of critical initiatives at their respective schools. Researchers also used attendance rates, office discipline referral counts, and the FAST ELA and math scores as outcome measures provided by the district.

Data Analysis

The district securely uploaded de-identified data from the 2021–22, 2022–23, and 2023–24 school years via FTP for analysis by Instructure researchers. Researchers used descriptive statistics to characterize usage, defined as the percentage of critical initiatives implemented at

each school. Regression models were then conducted to assess the impact of critical initiative implementation levels on students' 2024 outcomes, including discipline, attendance, and FAST ELA and math performance, while controlling for data from the 2021–2022 school year.

IMPLEMENTATION

This section examines the implementation of critical initiatives during the 2021–22, 2022–23, and 2023–24 school years. School leaders self-reported their level of implementation, providing detailed information on their perceptions of the progress of critical initiatives at their respective schools, which may not fully capture the extent of implementation. Researchers then analyzed the level of implementation by calculating the percent of critical initiatives implemented to assess schools' engagement with the district's strategic plan.

1 **What critical initiatives did administrators and strategic improvement team members develop for the school district?**

The strategic plan included fifteen critical initiatives for the school district (see Table 1).

Table 1. Critical initiatives for the school district

	Critical Initiatives
1	Provide professional learning opportunities that focus on best practices in positive relationships, high expectations, project-based learning, and student engagement
2	Structure a uniform student advocacy program for every student district wide
3	Integrate school wide activities that engage students outside of the classroom to keep all students connected with the school
4	Incorporate career connection, life/soft skill, dating violence, mental health and all required instruction in one course
5	Allocate equitable opportunities at every school
6	Create a framework and protocol for district wide program evaluation
7	Implement a new teacher instructional framework
8	Structure a district-wide PLC model to support the new instructional coaching model and professional learning standards
9	Establish and implement shared leadership among district and school staff to support systematic structures
10	Develop common grading practices to increase instructional capacity
11	Design a framework to support consistent expectations for engaging stakeholders
12	Introduce and implement a user friendly communication platform that allows for seamless and instant communication between all stakeholders
13	Establish a routine for providing regular updates to parents, students, and staff regarding important events, school policies, academic progress, and extracurricular activities

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	Critical Initiatives
14	Promote an environment that encourages open dialogue and active participation from all stakeholders
15	Re-engage families that have withdrawn for homeschool or private school options

2 To what extent did administrators and strategic improvement team members implement the school districts' critical initiatives across all schools?

The percentage of critical initiatives implemented varied across schools. Table 2 includes the variation in implementation by school.

Table 2. Level of critical Initiative implementation by school

School	Percent of Critical Initiatives Implemented	School	Percent of Critical Initiatives Implemented
School 1	46.67	School 18	92.86
School 2	84.62	School 19	81.82
School 3	64.29	School 20	100
School 4	72.73	School 21	81.82
School 5	100	School 22	64.29
School 6	100	School 23	81.82
School 7	100	School 24	90
School 8	100	School 25	100
School 9	80	School 26	63.64
School 10	64.28	School 27	73.33
School 11	100	School 28	92.31
School 12	73.33	School 29	86.67
School 13	50	School 30	63.64
School 14	100	School 31	92.86
School 15	92.31	School 32	81.82
School 16	100	School 33	100
School 17	73.33		

STUDENT OUTCOMES

The following sections examine how the level of implementation of critical initiatives relate to student outcomes such as attendance rates, office discipline referral counts, and FAST ELA and math scores. Researchers controlled for prior attendance rates, office discipline referral counts, and achievement on the FAST assessment (spring 2022). Additional information on these analyses and findings can be found in Appendix A.

Researchers reported statistically significant findings at the $p < .05$ level, which indicates a 95% probability that observed differences in student outcomes are not due to chance. To determine the magnitude of the relationship, researchers also calculated standardized effect sizes (omega squared, Ω^2). Standardized beta coefficients are translated into percentile point differences using the WWC Improvement Index (WWC, 2022). Significant findings are marked blue (positive results) or orange (negative results) in figures with an asterisk. Findings that are not statistically significant are marked grey.

3 **How does the type or level of implementation of critical initiatives relate to student attendance data, disciplinary data, and academic performance?**

Researchers conducted multiple linear regression models to examine the relationship between varying implementation levels of critical initiatives and attendance rates, office discipline referral counts, and FAST ELA and math scores, controlling for spring 2022 student outcomes.

Student attendance data. Results showed no statistically significant relationship between the percent of critical initiatives implemented and attendance rates from the 2023–24 school year, while controlling for attendance rates from the 2021–22 school year (see Figure 1).

There was no statistically significant relationship between percent of critical initiatives implemented and attendance rates.
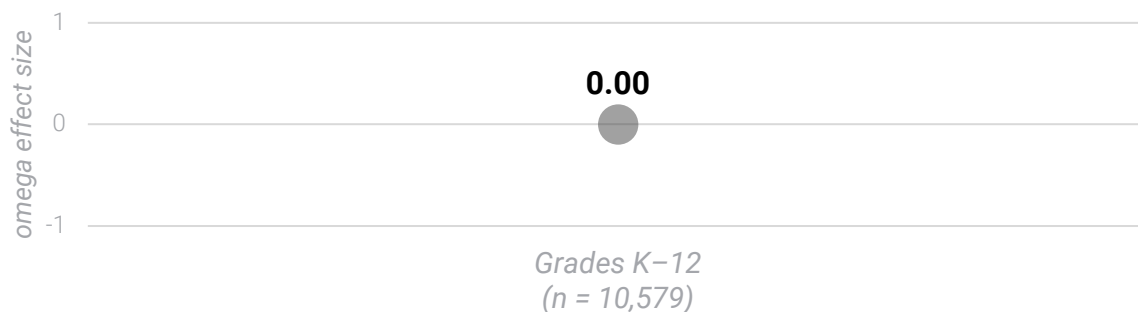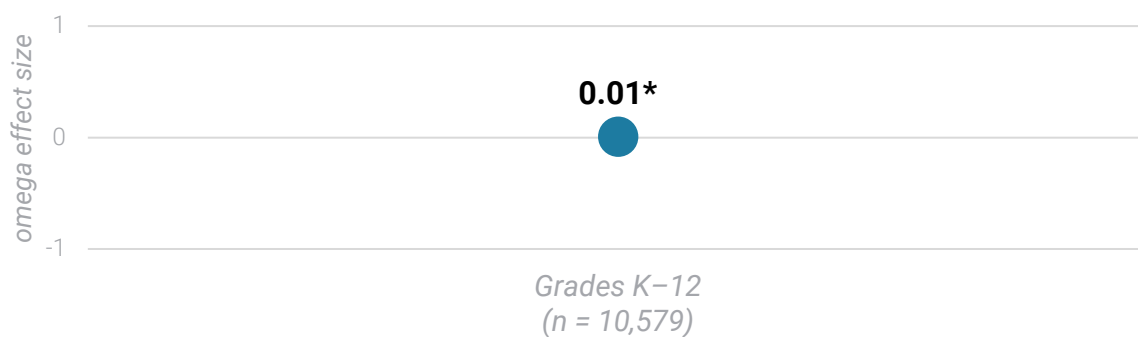

Note: Statistically significant findings are reported at the $p < .05$ level.

Figure 1. Omega squared effect size of the regression model examining the relationship between percent of critical initiatives implemented and attendance rates

Student disciplinary data. Results showed a statistically significant relationship between the percentage of critical initiatives implemented at a school and students' office discipline referral counts in the 2023–24 school year, while controlling for office discipline referral counts in the 2021–22 school year. Specifically, K-12 students in schools with higher levels of critical initiative implementation had fewer office discipline referrals ($p < .001$, $\Omega^2 = 0.01$). For every 1% increase in critical initiatives implemented, student behavior improved by about 0.20 percentile points. While the effect is modest, continued implementation of initiatives may contribute to incremental gains in student behavior improvements (see Figure 2).

There was a statistically significant, positive relationship between percent of critical initiatives implemented and office discipline referral counts.
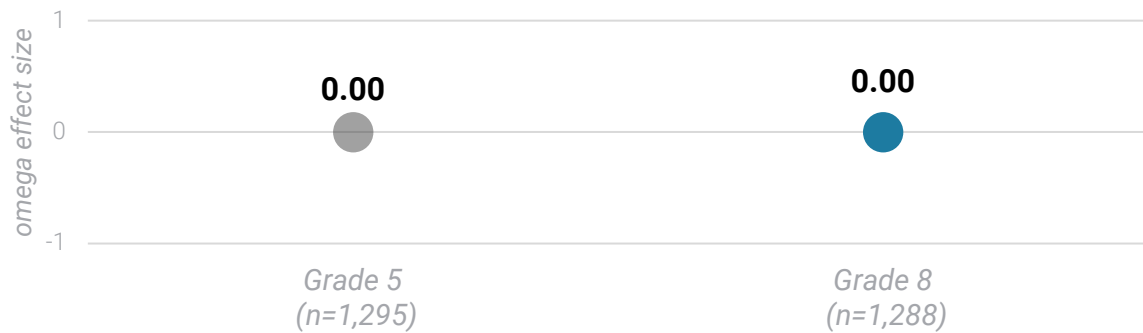

Note: Statistically significant findings are reported at the $p < .05$ level and indicated with an asterisk in the figure.

Figure 2. Omega squared effect size of regression model examining the relationship between percent of critical initiatives implemented and office discipline referral counts

ELA outcomes. Results showed one statistically significant, positive relationship between the percentage of critical initiatives implemented and FAST ELA assessment scores. Specifically, grade 8 students in schools with higher levels of critical initiative implementation correlated with higher FAST ELA scores ($p = .043$, $\Omega^2 = 0.00$). For every 1% increase in critical initiatives implemented, student performance improves by about 0.07 percentile points. While the effect is small, continued implementation of initiatives may contribute to incremental gains in student achievement. Results showed no statistically significant relationships for grade 5 (see Figure 3).

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There was a statistically significant, positive relationship between percent of critical initiatives implemented and FAST ELA scores in grade 8.
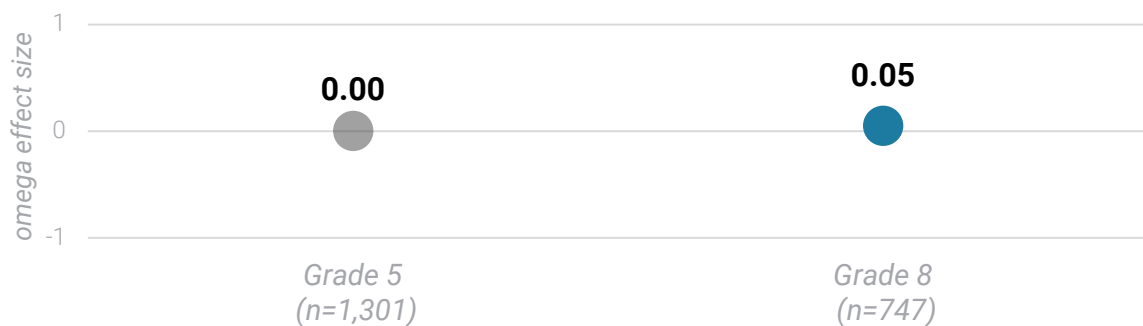

Note: Statistically significant findings are reported at the p < .05 level and indicated with an asterisk in the figure.

Figure 3. Omega squared effect sizes of regression models examining the relationship between percent of critical initiatives implemented and FAST ELA scores

Math outcomes. Results showed one statistically significant, positive relationship between the percentage of critical initiatives implemented and FAST math assessment scores. Grade 8 students in schools with higher levels of critical initiative implementation correlated with higher FAST math scores ($p < .001$, $\Omega^2 = 0.05$). For every 1% increase in critical initiatives implemented, student performance improves by about 0.30 percentile points. While the effect is small, continued implementation of initiatives may contribute to incremental gains in student achievement. Results showed no statistically significant relationships for grade 5 (see Figure 4).

There was a statistically significant, positive relationship between percent of critical initiatives implemented and FAST math scores in grade 8.

Note: Statistically significant findings are reported at the p < .05 level and indicated with an asterisk in the figure.

Figure 4. Omega squared effect sizes of regression models examining the relationship between percent of critical initiatives implemented and FAST math scores

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CONCLUSIONS

In conclusion, findings indicate statistically significant positive relationships between the level of implementation for critical initiatives and discipline office referrals and FAST ELA and math scores for grade 8. There was no statistically significant relationship between the level of implementation for critical initiatives and attendance rates, FAST ELA and math scores for grade 5. Future research could explore outcomes in schools that include more students in each grade to provide a more comprehensive understanding.

Given the statistically significant positive findings, this study provides results to satisfy ESSA evidence requirements for Level III (Promising Evidence). Specifically, this study met the following, minimum criteria for Level III:

- ✔ Correlational study elements
- ✔ Proper design and implementation
- ✔ Statistical controls through covariates
- ✔ At least one statistically significant, positive correlation with statistical controls for selection bias

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APPENDIX A

The following section provides additional details regarding analyses examining the relationship between the percent of critical initiatives implemented and student outcomes, including attendance, discipline, and the Florida Assessment of Student Thinking (FAST) ELA and math scores. Researchers reported statistically significant findings at the $p < .05$ level and calculated standardized effect sizes.

How does the type or level of implementation of critical initiatives relate to students attendance data, disciplinary data, and academic performance?

Researchers conducted multiple linear regression models to examine the relationship between varying implementation levels of critical initiatives and attendance rates, office discipline referral counts, and FAST ELA and math scores, controlling for spring 2022 student outcomes. There were three statistically significant positive relationships between the level of implementation for critical initiatives and discipline office referrals for grades K–12, and FAST ELA and math scores for grade 8. There was no statistically significant relationship between the level of implementation for critical initiatives and attendance rates, FAST ELA and math scores for grade 5.

Table A1. Greater details of linear regressions between percent of critical initiatives implemented and student attendance rates and office discipline referral counts

Variable	Coefficient	Standard Error	t-value	p-value	Effect size (Ω^2)
Attendance (n=10,579)					
Grades K-12	0.01	0.01	0.90	0.368	-0.00
Discipline (n=10,579)					
Grades K-12	0.01	0.001	9.20	< .001	0.01

Table A2. Greater details of linear regressions between percent of critical initiatives implemented and student FAST ELA and math scores

Variable	Coefficient	Standard Error	t-value	p-value	Effect size (Ω²)
FAST ELA (n=2,583)					
Grade 5 (n=1,295)	0.03	0.02	1.58	.115	0.00
Grade 8 (n=1,288)	0.04	0.02	2.02	.043	0.00
FAST math (n=2,048)					
Grade 5 (n=1,301)	0.04	0.02	1.78	.075	0.00
Grade 8 (n=747)	0.16	0.03	6.02	< .001	0.05